

GOPIKRISHNA V
S4 CSE A
52

FACTORIAL

```
echo "FACTORIAL OF 'n'"

echo -n "Enter 'n' >> "
read n

fact=1
z=0

if [ $n == $z ] ; then
    echo "FACTORIAL OF 0 >> 1"
else
    for((i=2;i<=n;i++))
    do
        fact=$((fact*i))
    done
fi

echo -n "FACTORIAL OF '$n' >> $fact"

echo
```

A terminal window titled 'ubuntu@administrator-hcl-desktop: ~/Desktop/G52' with standard window controls. The terminal shows the execution of a script named 'fact.sh'. The first run calculates the factorial of 5, resulting in 120. The second run calculates the factorial of 7, resulting in 5040. The prompt is 'administrator@administrator-hcl-desktop:~/Desktop/G52\$'.

SIMPLE CALCULATOR

```
echo "SIMPLE CALCULATOR"
echo -n "Enter NUM 1 = "
read num1
echo -n "Enter NUM 2 [ != 0 ] = "
read num2

ch=0

while [ $ch != 5 ] ;
do
    echo "          MENU"
    echo $"1.ADD 2.SUB 3.MUL 4.DIV 5.EXIT"
    echo -n "Enter Choice [1,2,3,4,5] >> "
    read ch

    if [ $ch == 1 ] ;
    then
        result=$((num1+num2))
        echo "RESULT >> $result"
    fi

    if [ $ch == 2 ] ;
    then
        result=$((num1-num2))
        echo "RESULT >> $result"
    fi

    if [ $ch == 3 ] ;
    then
        result=$((num1*num2))
        echo "RESULT >> $result"
    fi

    if [ $ch == 4 ] ;
    then
        result=$((num1/num2))
        echo "RESULT >> $result"
    fi

done
```

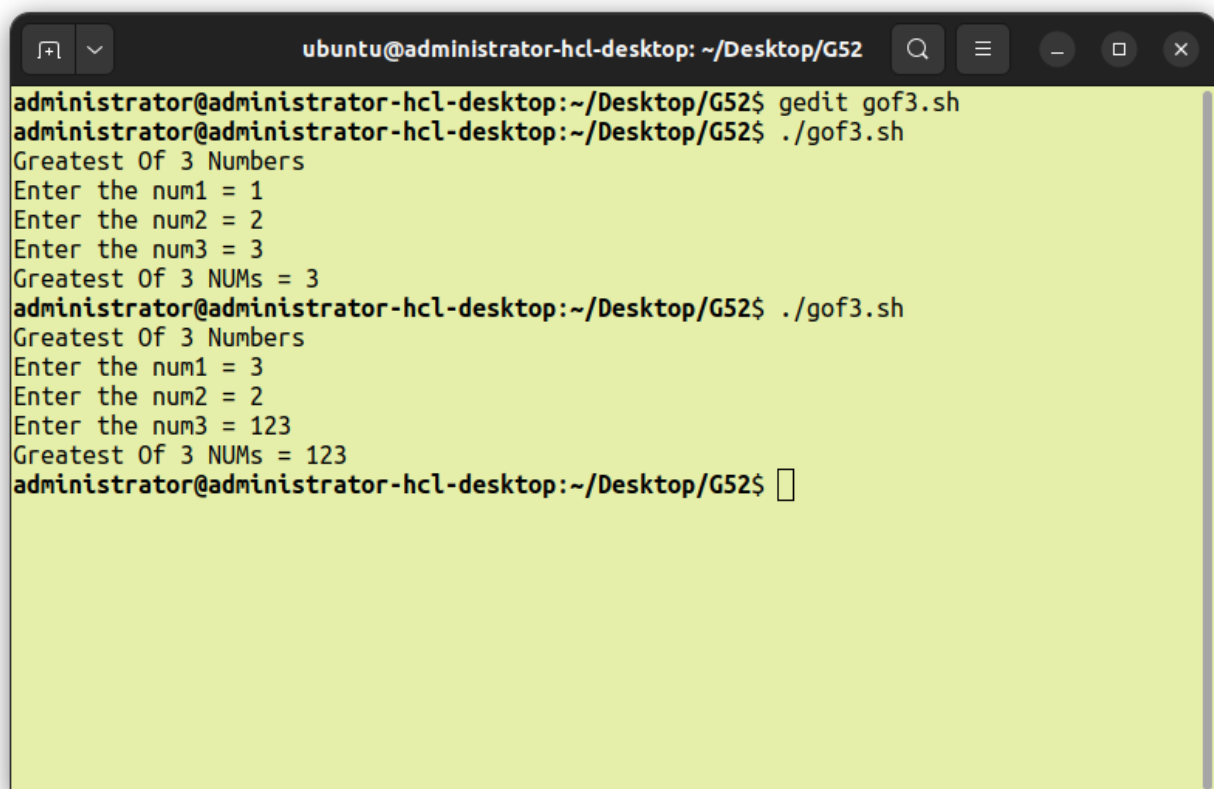
```
ubuntu@administrator-hcl-desktop: ~/Desktop/G52
administrator@administrator-hcl-desktop:~/Desktop/G52$ ./calc.sh
SIMPLE CALCULATOR
Enter NUM 1 = 4
Enter NUM 2 [ != 0 ] = 2
      MENU
1.ADD 2.SUB 3.MUL 4.DIV 5.EXIT
Enter Choice [1,2,3,4,5] >> 4
RESULT >> 2
      MENU
1.ADD 2.SUB 3.MUL 4.DIV 5.EXIT
Enter Choice [1,2,3,4,5] >> 3
RESULT >> 8
      MENU
1.ADD 2.SUB 3.MUL 4.DIV 5.EXIT
Enter Choice [1,2,3,4,5] >> 2
RESULT >> 2
      MENU
1.ADD 2.SUB 3.MUL 4.DIV 5.EXIT
Enter Choice [1,2,3,4,5] >> 1
RESULT >> 6
      MENU
1.ADD 2.SUB 3.MUL 4.DIV 5.EXIT
Enter Choice [1,2,3,4,5] >> 5
administrator@administrator-hcl-desktop:~/Desktop/G52$
```

GREATEST OF 3 NUMBERS

```
echo "Greatest Of 3 Numbers"
```

```
echo -n "Enter the num1 = "  
read num1  
echo -n "Enter the num2 = "  
read num2  
echo -n "Enter the num3 = "  
read num3
```

```
if [ $num1 -gt $num2 ] && [ $num1 -gt $num3 ]  
then  
    echo "Greatest Of 3 NUMs = $num1"  
elif [ $num2 -gt $num3 ] ;  
then  
    echo "Greatest Of 3 NUMs = $num2"  
else  
    echo "Greatest Of 3 NUMs = $num3"  
fi
```



A terminal window titled 'ubuntu@administrator-hcl-desktop: ~/Desktop/G52' showing the execution of a script named 'gof3.sh'. The script prompts for three numbers and outputs the greatest of them. The first run shows inputs 1, 2, and 3, resulting in 'Greatest Of 3 NUMs = 3'. The second run shows inputs 3, 2, and 123, resulting in 'Greatest Of 3 NUMs = 123'.

```
ubuntu@administrator-hcl-desktop: ~/Desktop/G52  
administrator@administrator-hcl-desktop:~/Desktop/G52$ gedit gof3.sh  
administrator@administrator-hcl-desktop:~/Desktop/G52$ ./gof3.sh  
Greatest Of 3 Numbers  
Enter the num1 = 1  
Enter the num2 = 2  
Enter the num3 = 3  
Greatest Of 3 NUMs = 3  
administrator@administrator-hcl-desktop:~/Desktop/G52$ ./gof3.sh  
Greatest Of 3 Numbers  
Enter the num1 = 3  
Enter the num2 = 2  
Enter the num3 = 123  
Greatest Of 3 NUMs = 123  
administrator@administrator-hcl-desktop:~/Desktop/G52$
```

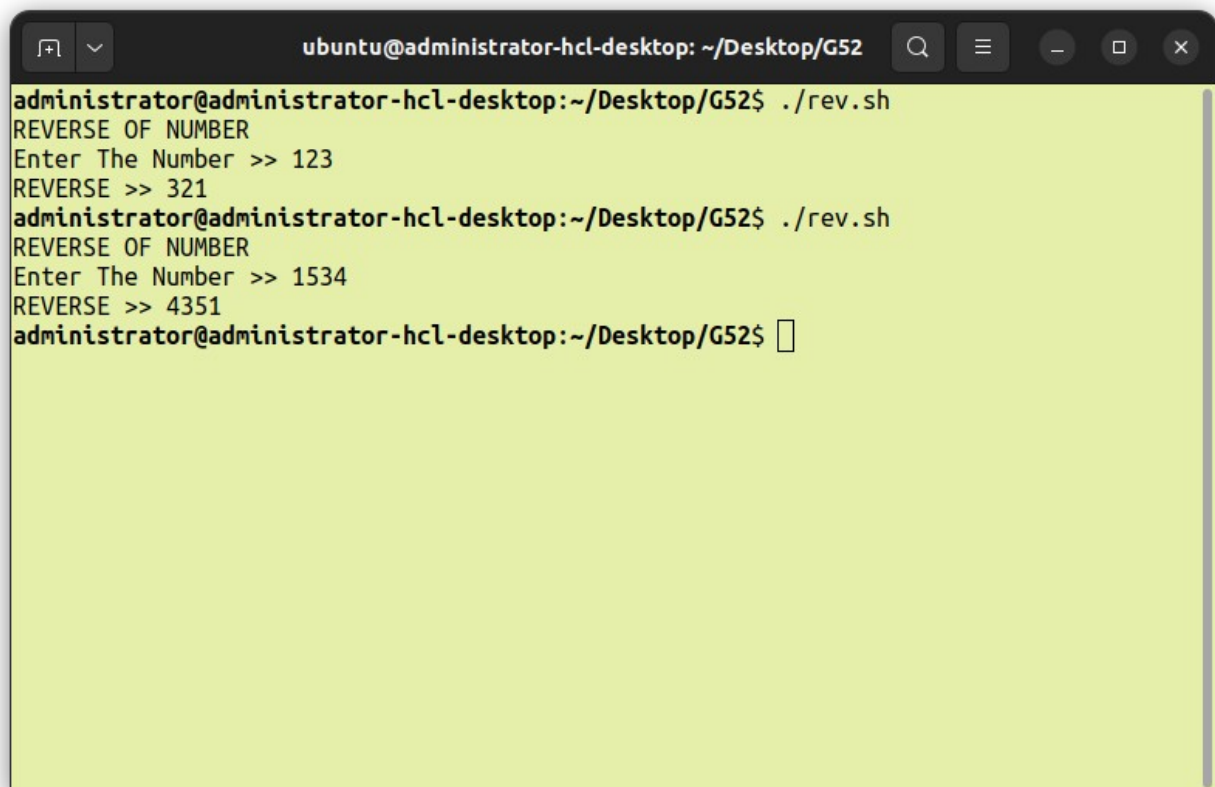
REVERSE OF A NUMBER

```
echo "REVERSE OF NUMBER"
```

```
echo -n "Enter The Number >> "  
read n
```

```
while [ $n -ne 0 ] ;  
do  
    rem=$((n%10))  
    rev=$(( (rev*10)+rem ))  
    n=$((n/10))  
done
```

```
echo "REVERSE >> $rev"
```



```
ubuntu@administrator-hcl-desktop: ~/Desktop/G52  
administrator@administrator-hcl-desktop:~/Desktop/G52$ ./rev.sh  
REVERSE OF NUMBER  
Enter The Number >> 123  
REVERSE >> 321  
administrator@administrator-hcl-desktop:~/Desktop/G52$ ./rev.sh  
REVERSE OF NUMBER  
Enter The Number >> 1534  
REVERSE >> 4351  
administrator@administrator-hcl-desktop:~/Desktop/G52$
```

FIBONACCI SERIES

```
echo "FIBONACCI SERIES"
```

```
n1=0
```

```
n2=1
```

```
n3=$((n1+n2))
```

```
echo -n "Enter Limit >> "
```

```
read lim
```

```
echo -n "FIBONACCI SERIES upto $lim >> "
```

```
echo -n "$n1 $n2"
```

```
for (( i=3 ; i <= lim ; ++i ))
```

```
do
```

```
    echo -n " $n3"
```

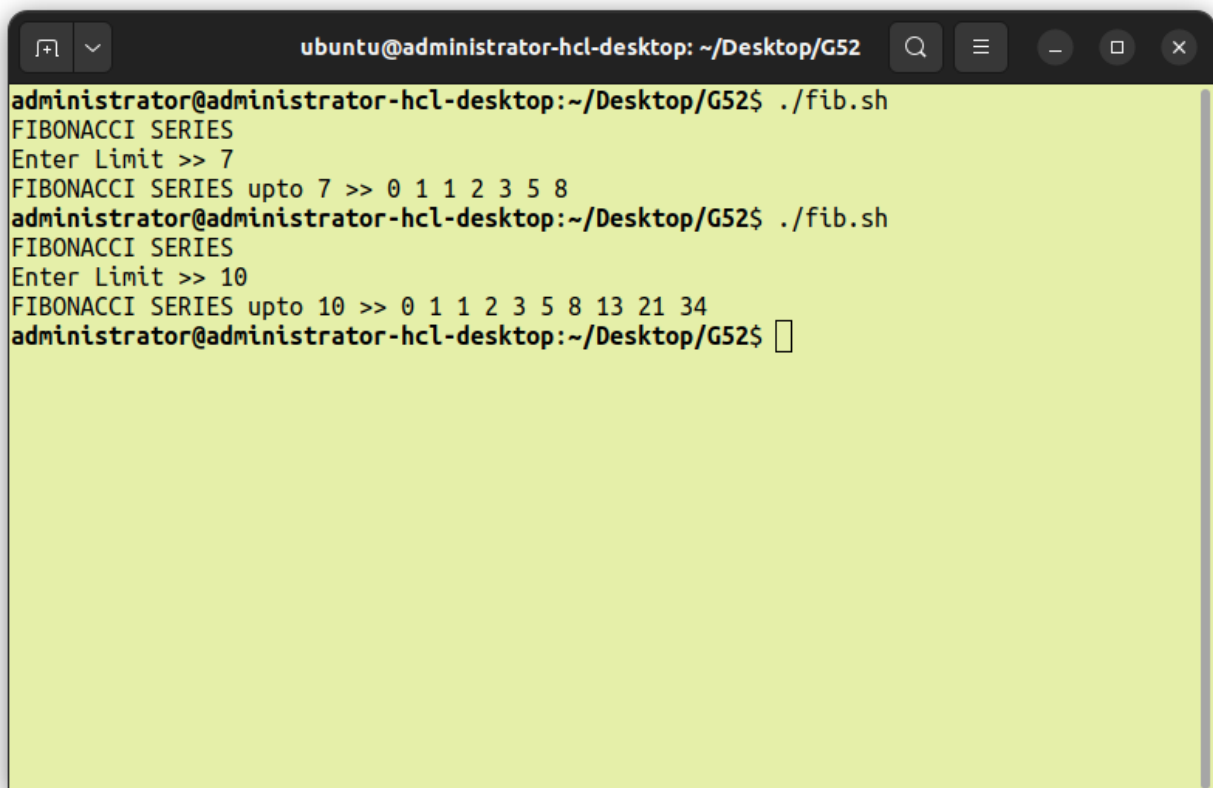
```
    n1=$n2
```

```
    n2=$n3
```

```
    n3=$((n1+n2))
```

```
done
```

```
echo
```

A terminal window titled 'ubuntu@administrator-hcl-desktop: ~/Desktop/G52' with standard window controls. The terminal shows the execution of a script named 'fib.sh'. The first run with limit 7 outputs 'FIBONACCI SERIES' and '0 1 1 2 3 5 8'. The second run with limit 10 outputs 'FIBONACCI SERIES' and '0 1 1 2 3 5 8 13 21 34'.

```
ubuntu@administrator-hcl-desktop: ~/Desktop/G52
administrator@administrator-hcl-desktop:~/Desktop/G52$ ./fib.sh
FIBONACCI SERIES
Enter Limit >> 7
FIBONACCI SERIES upto 7 >> 0 1 1 2 3 5 8
administrator@administrator-hcl-desktop:~/Desktop/G52$ ./fib.sh
FIBONACCI SERIES
Enter Limit >> 10
FIBONACCI SERIES upto 10 >> 0 1 1 2 3 5 8 13 21 34
administrator@administrator-hcl-desktop:~/Desktop/G52$
```